

ABSTRACT

The present invention relates to a method of and an apparatus for forming a thin metal film of copper, 5 silver, or the like on a surface of a semiconductor or another substrate. A method of forming a thin metal film, comprises preparing a dispersed liquid having a metal-containing organic compound dispersed in a predetermined solvent, coating the dispersed liquid on a surface of a 10 substrate and evaporating the solvent to form a coating layer, and applying an energy beam to the coating layer to decompose away an organic substance contained in the coating layer in an area irradiated with the energy beam and bond metal contained in the coating layer. According to the 15 present invention, it is possible to form a thin metal film of good quality efficiently and stably. The thin metal film used as metal interconnects in highly integrated semiconductor circuits contributes to the progress of a process of fabricating semiconductor devices.